

WHAT IS CLAIMED IS:

Sub
a,
1. A semiconductor laser comprising:
an active layer made of semiconductor;
a ridge stripe having a cladding layer formed on said active layer and a contact layer formed on the cladding layer to protrude from said active layer;
a pair of gratings each having a periodic structure in a longitudinal direction of the ridge stripe having a plurality of grooves each extending from side walls of the ridge stripe on flat portions in both sides of the ridge stripe; and
absorbing layers covering the surfaces of the grooves of gratings to absorb excited light.

2. A semiconductor laser according to claim 1, wherein said absorbing layer comprises a first insulator kept contact with the surfaces of the grooves of gratings; a metal layer contiguously formed on the first insulator; and a second insulator contiguously formed on the metal layer.

3. A semiconductor laser according to claim 1, wherein said absorbing layer is an insulator layer comprising an insulator material as a matrix and metal particles dispersed in the matrix.

4. A semiconductor laser according to claim 1, further comprising bracket grating portions each having a slope surface extending from a flat top portion of the ridge stripe to a top

face of a land portion defined by the adjacent grooves and coupling the side walls of the ridge stripe and the gratings.

5. A semiconductor laser according to claim 1, wherein said active layer is a bulk layer, a single quantum well layer, or a multiple quantum well layer mainly composed of $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{P}_y$ (where $0 \leq x < 1$, $0 \leq y \leq 1$); and said cladding layer is made of InP.

6. A semiconductor laser according to claim 5, wherein said contact layer is made of InGaAsP or InGaAs.

7. A semiconductor laser according to claim 1, wherein the ridge stripe and the pair of gratings have a relationship between a waveguide without grating beneath and gratings laterally coupled thereto.